Cognitive Trauma Therapy for Battered Women With PTSD (CTT-BW)

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This article describes a second treatment-outcome study of cognitive trauma therapy for battered women with posttraumatic stress disorder (PTSD; CTT-BW). CTT-BW includes trauma history exploration; PTSD education; stress management; exposure to abuse and abuser reminders; self-monitoring of negative self-talk; cognitive therapy for guilt; and modules on self-advocacy, assertiveness, and how to identify perpetrators. One hundred twenty-five ethnically diverse women were randomly assigned to immediate or delayed CTT-BW. PTSD remitted in 87% of women who completed CTT-BW, with large reductions in depression and guilt and substantial increases in self-esteem. White and ethnic minority women benefited equally from CTT-BW. Similar treatment outcomes were obtained by male and female therapists and by therapists with different levels of education and training. Gains were maintained at 3- and 6-month follow-ups.

Even though posttraumatic stress disorder (PTSD) did not become an official psychiatric disorder until 1980 (American Psychiatric Association, 1980), it is a pernicious and widespread problem—affecting an estimated 10.4% of American women and 5.4% of American men at some point in their lives (Kessler, Sonnega, Bromet, Hughes, & Nelson, 1995). PTSD symptom clusters include (a) reexperiencing the trauma (e.g., unwanted intrusive memories, distressing trauma-related dreams), (b) avoidance (e.g., efforts to avoid thinking about the trauma), (c) emo-tional numbing (e.g., detachment from others, inability to experience positive emotions), and (d) hyperarousal (e.g., insomnia, hypervigilance, difficulty concentrating). PTSD often co-occurs with depression and with many other psychiatric problems, and is a risk factor for serious medical problems (see Kubany, Leisen, Kaplan, & Kelly, 2000, for a brief review). In addition, PTSD is often a chronic condition. For example, it has been estimated that more than one third of those diagnosed with PTSD still have the condition 5 years later (Kessler et al., 1995).

In recent years, there has been a surge of interest in developing and evaluating treatments for PTSD, and cognitive–behavioral interventions have shown considerable promise (see Blake & Sonnenberg, 1998; Foa & Meadows, 1997). Much of this treatment-outcome research has focused on women survivors of sexual abuse or assault. Studies of cognitive processing therapy for rape victims (e.g., Resick & Schnicke, 1992) and prolonged exposure for the treatment of rape-related PTSD (e.g., Rothbaum, Foa, Riggs, Murdock, & Walsh, 1992) have obtained reductions or elimination of PTSD in a substantial proportion of clients treated.

In spite of the recent increase in PTSD treatment-outcome research, until recently (Kubany, Hill, & Owens, 2003), we could locate no published treatment-outcome study aimed at alleviating PTSD in battered women, who as a group comprise one of the largest traumatized populations in North America (Council on Scientific Affairs, American Medical Association, 1992), if not the world (Heise, Ellsberg, & Gottemoeller, 1999). According to the National Violence Against Women Survey (Tjaden & Thoennes, 2000), almost 25% of American woman are raped or physically assaulted by a current or former spouse, cohabiting partner, or date at some time in their lifetime. According to the survey, approximately 1.5 million American women are raped and/or physically assaulted by an intimate partner each year.

Moreover, rates of PTSD among battered women are much higher than in the population at large (Kubany, Haynes, et al., 2000; Kubany, Leisen, et al., 2000; see Kubany & Watson, 2002). For example, prevalence of PTSD among women in shelters for battered women has ranged from 45% to 84% (see Kubany et al., 1995).

There is considerable evidence that cognitions play an important role in the maintenance or chronicity of posttraumatic stress (e.g., Brewin, Dalgleish, & Joseph, 1996; Ehlers & Clark, 2000; Foa, Ehlers, Clark, Tolin, & Orsillo, 1999; Kubany et al., 1996; Kubany & Watson, 2002, 2003a). Much of this research has focused on survivors' phenomenology of their role in trauma, much of which has to do with guilt and self-blame (see Kubany, 1998, for a brief review). In fact, guilt is a very common problem among women who have been physically or sexually abused. Among 168 women in support groups for battered women, almost half (49%) reported moderate or greater guilt related to their abuse (Kubany et al., 1996). Only 6 of these women had no abuse-related guilt. Among 212 physically and/or sexually abused women with structured interview diagnoses of PTSD, 75% had moderate or greater abuse-related guilt on the Global Guilt Scale of the Trauma-Related Guilt Inventory (TRGI; Kubany, Owens, Kaplan, Leisen, & Ramelli, 2003).

Guilt severity is positively and significantly related to PTSD severity. In three separate samples of Vietnam combat veterans, combat-related guilt was correlated between .67 and .81 with combat-related PTSD (Kubany, Abueg, Kilauano, Manke, & Kaplan, 1997; Kubany et al., 1995, 1996). In a sample of 50 women in support groups for battered women, an index of partner abuse-related guilt was correlated .51 with PTSD (Kubany et al., 1995). Similarly, in a sample of 68 women in support groups for battered women, the Global Guilt and Guilt Cognitions scales of the TRGI were both correlated .55 with partner abuse-related PTSD (Kubany et al., 1996).

In our conceptualization of chronic PTSD, guilt-associated beliefs and guilt-associated language repertoires contribute importantly to the persistence or chronicity of trauma-related distress and depression (Kubany & Watson, 2002, 2003a). For example, an important reason why memories of trauma may not lose their capacity to evoke emotional pain over time may be due to higher order language conditioning (Kubany & Watson, 2002)—whereby guilt-associated appraisals that have acquired the ability to evoke negative affect (e.g., "I never should have," "I could have prevented it") function as conditioned language stimuli in pairings with images or thoughts of the trauma (Staats, 1972, 1996). Such appraisals may also control or lead to shame-related appraisals, such as "There's something wrong with me," "I'm so stupid," or "I'm a bad mother." If habitually paired with recollections of trauma, such affect-evoking appraisals may repeatedly recondition memories of the trauma with distress. Affect-evoking guilt cognitions may also function as self-punishment that contributes to depression (e.g., Pitman et al., 1991), and tendencies to suppress or avoid trauma-related memories that evoke guilt may interfere with the process of spontaneous recovery or natural extinction due to insufficient exposure durations (Rohrbaugh, Riccio, & Arthur, 1972).

On the basis of a review of the literature on battered women, Kubany and Watson (2002) identified several issues or problems faced by many battered women—in addition to PTSD—which may complicate their treatment. First, many battered women have guilt and shame issues that are unique to the population—for example, guilt and shame related to a "failed" marriage, effects of the violence on the children, and guilt and shame related to decisions to stay in or leave the relationship. Battered women may require special cognitive interventions that target and facilitate the reprocessing of these complicated cognitive issues. Second, many treatment-seeking battered women have experienced prolonged, repeated trauma. Not only are they likely to have been repeatedly traumatized by intimate partners in multiple ways (threats, stalking, sexual abuse), but many are also likely to have histories of exposure to other forms of interpersonal violence, such as childhood physical and/or sexual abuse (see Table 1). Such repeated and multimodal abuse may contribute not only to the severity of PTSD but also to collateral problems, such as deficits in assertiveness and tolerance of disrespect from others. Self-advocacy and empowerment or self-efficacy issues (e.g., Ozer & Bandura, 1990) may be particularly important to address as a therapeutic theme in treatments for battered women. Third, the lives of many formerly battered women remain enmeshed with their ex-partners because these men are fathers of the children, and continuing contacts are a frequent source of stress. Many formerly battered women could benefit from interventions that enable them to efficaciously manage stressful contacts with former partners. Fourth, many battered women are at risk for revictimization by subsequent intimate partners (51% of participants in the present study had been physically hurt by more than one intimate partner). A module on ways to identify potentially abusive suitors and prevent revictimization may be important to include in comprehensive trauma recovery programs for battered women.

Kubany and Watson (2002) recently reported on the development of a multimodule PTSD intervention specifically tailored for battered women. Cognitive trauma therapy for battered women with PTSD (CTT-BW) includes several treatment elements adapted from existing cognitive–behavioral treatments for PTSD, including: (a) psychoeducation about PTSD, (b) stress manage-

Table 1

Number and Percent of 125 Battered Women Who (a) Reported and (b) Reported and Were Traumatized by the 21 Specific Types of Events Listed on the Traumatic Life Events Questionnaire (TLEQ)

	Women who reported exposure		Women who were traumatized by event	
TLEQ event	*n*	%	*n*	%
1. Natural disaster	82	66	50	40
2. Motor vehicle accident	58	46	45	36
3. "Other" kind of accident	43	34	32	26
4. Combat or warfare	1	1	1	1
5. Sudden death of friend or loved one	96	77	74	59
6. Life-threatening/disabling event to loved one	64	51	55	44
7. Life-threatening illness	36	29	33	26
8. Robbery with a weapon used	28	22	26	21
9. Assaulted by an acquaintance or stranger	36	29	31	25
10. Witnessed severe assault to acquaintance or stranger	54	43	47	38
11. Threatened with death or serious harm	111	89	100	80
12. Growing up: witnessed family violence	63	50	58	44
13. Growing up: physically abused	79	63	74	59
14. Physically hurt by an intimate partner	116	93	106	85
15. Before age 13: sexual contact—someone at least 5 years older	75	60	60	48
16. Before age 13: unwanted sexual contact—someone close in age	44	35	36	29
17. As a teen: unwanted sexual contact	50	40	44	35
18. As an adult: unwanted sexual contact	76	61	70	56
19. Stalked	96	77	82	66
20. Miscarriage	44	35	35	28
21. Abortion	64	51	47	38

Note. Events were considered traumatic if exposure was accompanied by intense fear, helplessness or horror.

ment (including relaxation training), and (c) talk about the trauma and exposure homework. CTT-BW[1] also includes specialized procedures for the following: (a) assessing and correcting irrational guilt-related beliefs and (b) reducing negative self-talk—related to guilt and shame, in particular. Irrational guilt-related beliefs are identified and corrected in a systematic, semistructured format (Kubany & Manke, 1995). Negative self-talk habits are addressed directly by teaching clients to observe their mental life by means of self-monitoring homework and to break habitual bad habits of using negatively evaluative words in thoughts and speech (Kubany, 1998).

CTT-BW also includes modules that address issues that may complicate the treatment of battered women. These modules focus on self-advocacy and empowerment and include (a) psychoeducation on cognitive and behavioral self-advocacy strategies, (b) assertive communication skill building, (c) management of unwanted contacts with former partners, and (d) ways to identify potential perpetrators and avoid revictimization.

In an initial study to examine the efficacy of CTT-BW, Kubany, Hill, and Owens (2003) randomly assigned 37 ethnically diverse, formerly battered women to receive immediate CTT-BW or to a delayed CTT-BW group. There were no significant reductions in symptomatology among women in the delayed CTT-BW condition over the 6 weeks between the first and second pretherapy assessments. Edward S. Kubany was the therapist for all 37 women. Of 32 women who completed CTT-BW (86% of the initial sample), PTSD remitted as a diagnosis in all but 2 of the women (94%)—with a mean 83% reduction in PTSD symptomatology—on the basis of a structured interview assessment. Compared with pretherapy assessments, there were also significant reductions in depression ($M = 83\%$), trauma-related guilt ($M = 83\%$), trauma-related guilt cognitions ($M = 82\%$), and shame ($M = 72\%$). Self-esteem scores increased by a mean 92%. All gains were maintained at 3-month follow-up assessments ($n = 25$).

The purpose of the present research was to conduct a second treatment-outcome study of CTT-BW that was methodologically superior to the first study in certain respects. First, the sample size was considerably larger ($N = 125$ vs. $N = 37$). Second, the present study used multiple therapists (seven) versus only one. Third, follow-up assessments were conducted at 6 months as well as at 3 months posttherapy.

Method

Participants

Participants included 125 formerly battered women, most of whom were referred by victim services agencies that serve battered women in Hawaii. Participants ranged in age from 18 to 70, with a mean age of 42.2 years ($SD = 10.1$). Participants' levels of education ranged from 5th grade to a doctorate, with a mean of 13.5 years ($SD = 2.4$). Participants' ethnic

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[1] CTT-BW was designed for battered women who are not currently in an abusive relationship, have no intention of reconciling with an abusive partner, and are considered safe. All participants in the study described in this article met these criteria.

backgrounds were diverse and included White ($n = 66$), Native Hawaiian ($n = 11$), Filipino ($n = 9$), Japanese ($n = 8$), Black ($n = 6$), Samoan ($n = 6$), American Indian ($n = 2$), and other or mixed ethnicity ($n = 17$). All participants had been physically, sexually, and/or psychologically abused (e.g., threatened, stalked, badgered, humiliated) by an intimate or romantic partner. Sixty-eight percent of the sample ($n = 85$) reported having been physically hurt by intimate partners more than five times, and 51% ($n = 64$) had been physically hurt by more than one intimate partner. Even the small number of participants ($n = 9$) who did not report being physically hurt by an intimate partner were traumatized by other forms of partner abuse. For example, of the 9 women who were not physically hurt by an intimate partner, 3 were sexually abused, 5 were stalked, and 7 were threatened with death or serious bodily harm.

Most participants had been in long-standing relationships with their abusive partners; the mean period of time from the first to the last incident of abuse was 6.3 years ($SD = 6.9$). Among participants who had been physically abused by an intimate partner, the last incident of abuse occurred a mean 5.0 years prior to entering the study ($SD = 7.4$).

Most participants reported histories of multiple traumatizations in addition to partner abuse. Participants reported experiencing intense fear, helplessness, or horror in response to a mean 9.0 ($SD = 4.2$) types of events listed on the Traumatic Life Events Questionnaire (TLEQ; Kubany, Haynes, et al., 2000; Western Psychological Services, 2004c). The types and percentage of traumatic events reported by participants are presented in Table 1.

Women qualified for participation if they (a) had been out of an abusive relationship for at least 30 days with no intention of reconciling, (b) had not been physically or sexually abused or stalked by anyone for at least 30 days, (c) met diagnostic criteria for partner abuse-related PTSD, (d) obtained a score on the Global Guilt Scale of the TRGI reflecting at least moderate abuse-related guilt, (e) were not currently abusing alcohol or drugs, and (f) did not have schizophrenia or bipolar disorder. While participating in the study, women were not required to discontinue other services (e.g., other therapy, support groups) or prescription medication.

The study protocol was approved by the Human Subjects Subcommittee at the Honolulu Veterans Administration and by the Human Use Committee at Tripler Army Medical Center. Investigators adhered to the policies for protection of human subjects as prescribed in 45 *CFR* 46.

Measures

Rationale for selection of outcome measures. Almost all PTSD treatment-outcome research has included the assessment of both PTSD and depression, which is highly comorbid with PTSD (e.g., Resick & Schnicke, 1992). Hence, we assessed both PTSD and depression. Because guilt and cognitive processes associated with guilt are thought to contribute in important ways to the frequent chronicity and intractability of PTSD (e.g., Kubany & Watson, 2002, 2003a), and because guilt is a major target of treatment in CTT-BW, we included measures of trauma-related guilt and trauma-related guilt cognitions. Because trauma survivors tend to have multiple guilt issues (see Kubany & Manke, 1995, pp. 33–35), we included a partner abuse "guilt source" survey to assess the degree to which alleviation of treated sources of guilt generalizes to nontreated guilt sources. Because shame is a common problem among battered women (e.g., Dutton, 1992a), and because guilt may be causal in its relationship with shame (Kubany & Watson, 2003b), we included a measure of shame.

Although symptom relief is a major goal of any psychosocial intervention, more comprehensive approaches also focus on increasing positive aspects of mental health—such as happiness, life satisfaction, or self-esteem (Gladis, Gosch, Dishuk, & Crits-Cristoph, 1999). Because low self-esteem is a problem for many battered women (e.g., Dutton, 1992a), we included a measure of self-esteem. Finally, client satisfaction with services has been shown to be associated with service utilization as well as treatment outcomes (e.g., Attkisson & Zwick, 1982; Ciarlo, Edwards,

Kiresuk, Newman, & Brown, 1981); hence, we also assessed client satisfaction with the treatment provided.

Clinician-Administered PTSD Scale (CAPS). The CAPS (Blake et al., 1990) is a structured interview for assessing the symptoms of PTSD according to criteria in the *Diagnostic and Statistical Manual of Mental Disorders* (4th ed.; *DSM–IV*; American Psychiatric Association, 1994). The CAPS was found to have very good diagnostic efficiency when judged against the Structured Clinical Interview for *DSM–III–R* (Weathers et al., 1992).

Distressing Event Questionnaire (DEQ). The DEQ (Kubany, Leisen, et al., 2000; Western Psychological Services, 2004a) assesses PTSD according to criteria provided in the *DSM–IV*. In four separate samples of physically and/or sexually abused women ($N = 255$), the DEQ exhibited excellent discriminative validity when judged against structured interview assessment of PTSD—correctly classifying the PTSD status of 90% of participants overall. In the battered women's sample, the DEQ was correlated .82 with the CAPS, .86 with the Modified PTSD Scale, and .78 with depression. The DEQ also exhibited strong convergent validity across ethnic groups.

Beck Depression Inventory (BDI). The BDI (Beck, Steer, & Garbin, 1988) is a widely used measure of depression, with well-established reliability and validity.

Rosenberg Self-Esteem Scale (RSES). The RSES (Rosenberg, 1965) is a 10-item scale that assesses general feelings of self-acceptance and self-respect. The scale has been shown to possess good reliability and adequate construct, convergent, and discriminant validity (Blascovich & Tomaka, 1991). Internal consistency was high in a sample of 268 physically and/or sexually abused women ($\alpha = .92$; Kubany, Owens, et al., 2003). In a sample of women waiting to receive treatment for PTSD, 6-week test–retest reliability was .79 (Kubany, Hill, & Owens, 2003). In a sample of battered women, the scale was significantly correlated with PTSD ($-.61$), depression ($-.72$), and shame proneness ($-.62$; Kubany et al., 1996). The RSES was also very responsive to modification in the first treatment-outcome study of CTT-BW (Kubany, Hill, & Owens, 2003).

TRGI. The 32-item TRGI (Kubany et al., 1996; Western Psychological Services, 2004b) assesses guilt and cognitive and emotional aspects of guilt associated with specific traumatic events. The TRGI has a stable factor structure, high internal consistency, and adequate temporal stability. The TRGI includes a Global Guilt Scale (e.g., "I experience intense guilt related to what happened"), a Distress Scale (e.g., "I am still distressed about what happened"), a Guilt Cognitions Scale, and three guilt-cognition subscales—Hindsight Bias/Responsibility (e.g., "I should have known better," "I blame myself for something I did, thought, or felt"), Wrongdoing (e.g., "I did something that went against my values") and Lack of Justification (e.g., "What I did was completely justified" [reverse scored]), which, along with six miscellaneous guilt-cognition items (e.g., "I did something I should not have done"), comprise the 22-item Guilt Cognitions Scale. TRGI scales and subscales were significantly correlated with measures of PTSD, depression, negative self-esteem, and guilt and shame proneness in samples of battered women and combat veterans.

Sources of Trauma-Related Guilt Survey—Partner Abuse Version (STRGS–PA). The STRGS–PA (Kubany, Owens, & Leigh, 1998) assesses 95 potential sources of partner abuse-related guilt (e.g., guilt about "not leaving sooner," "fighting back," or "negative effects of the abuse on the children"). Items for the STRGS–PA were generated from multiple sources of information (e.g., reviews of the battered-women literature, structured interviews with battered women, evaluative reviews by domestic violence experts) to enhance content validity across the domain of important guilt issues among battered women. In a sample of treatment-seeking battered women, the sum of ratings on the guilt-source items was significantly correlated with PTSD, depression, and negative self-esteem.

Personal Feelings Questionnaire (PFQ). The PFQ (Harder & Lewis, 1986) assesses tendencies to experience guilt and shame. Only results for the Shame Scale were used for the present study. The PFQ Shame Scale

(e.g., "feeling humiliated, stupid, childish") has been shown to possess adequate reliability, concurrent validity with other measures of shame, and construct validity (Harder & Zalma, 1990). In a sample of 68 battered women, PFQ shame was correlated .68 with PTSD, .69 with depression, .61 with abuse-related guilt, and −.62 with self-esteem (Kubany et al., 1996).

Client Satisfaction Questionnaire (CSQ-8). The CSQ-8 (Attkisson & Zwick, 1982; Larsen, Attkisson, Hargreaves, & Nguyen, 1979) assesses postservice client satisfaction. The CSQ-8 has adequate psychometric properties and has been favorably reviewed by several independent sources (see Ogles, Lambert, & Masters, 1996).

TLEQ. The TLEQ assesses exposure to a broad spectrum of 21 potentially traumatic events. TLEQ items were developed from multiple sources of information to enhance content validity across the domain of important traumatic events. In separate studies with college students, Vietnam veterans, battered women, and substance-abusing men and women, most items possessed adequate to excellent temporal stability. During the initial CTT-BW session, the therapist asks clients about experienced TLEQ events and probes for guilt related to these events, which may be addressed in subsequent sessions.

Procedure

Women volunteering to participate were screened for project eligibility using semistructured phone interviews. Women who appeared to be eligible on the basis of this screening were then scheduled for the full initial assessment, which included administration of an informed consent, a structured PTSD interview, and the psychological questionnaires. Fourteen women who passed the phone screening did not qualify for participation on the basis of full initial assessment. Every 2 consecutive women determined to be eligible were randomly assigned either to an immediate CTT-BW condition or to a delayed CTT-BW condition. Two weeks after completing CTT-BW, women in the immediate CTT-BW condition received their posttherapy assessment. At the same time (about 6 weeks after their initial assessment), women in the delayed CTT-BW group received a second pretherapy assessment and then received CTT-BW.

Training assessors in CAPS administration. The CAPS tests were administered by six doctoral candidates in clinical psychology who were trained to administer the CAPS by Edward S. Kubany. The assessors were given a lecture on administration of the CAPS, watched two to four CAPS-administration videos, watched Edward S. Kubany administer the CAPS at least twice, and were observed administering the CAPS at least twice by him for corrective feedback and to ensure interviewer competence. The assessors were blind to participants' condition assignments, and none served as therapists in the study.

Therapists and therapist training. CTT-BW was conducted by Edward S. Kubany and six other individuals—one man and five women—who were trained to conduct CTT-BW by him. The man is a clinical psychologist with postdoctoral training in PTSD. Among the women, two have advanced degrees in nursing, one has a master's degree in counseling psychology and also works as a victim witness advocate, and two have baccalaureate degrees and several years of experience in the field of domestic violence as counselors and educators. All the CTT-BW therapists had completed multiday workshops on domestic violence.

The therapists were provided intensive training and close supervision in conducting CTT-BW. Therapist training included (a) attending a workshop on CTT-BW, (b) reading the procedural manual, (c) listening to numerous audiotapes of CTT-BW sessions, (d) viewing several hours of Edward S. Kubany conducting CTT-BW by means of closed circuit television, followed by debriefings, (e) modeling and role-playing practice of CTT-BW procedures, and (f) conducting CTT-BW with two clients as a cotherapist with Edward S. Kubany. Edward S. Kubany provided the therapists with regular supervision and, as needed, consultation throughout the study.

CTT-BW was conducted following a preliminary 55-page procedural manual and 30-page therapist–client workbook. Because CTT-BW is highly psychoeducational, the manual is quite specific in instructing therapists what to do and say, much like following a lesson plan or teaching a course from lecture notes. Therapist adherence to the protocol was further promoted by having therapists use and follow the manual and workbook in therapy sessions.

Therapist adherence to the CTT-BW protocol. All therapy sessions were audiotaped. Using CTT-BW therapist-adherence rating scales, therapist adherence ratings were obtained for 60 therapy sessions (approximately 7.5% of all sessions). For each of the seven therapists, six to nine tapes of sessions were randomly selected from the 1st third, 2nd third, and last third of sessions of randomly selected participants. Therapist adherence was rated along three dimensions: (a) adherence to nonspecific factors and generic cognitive–behavioral therapy (CBT) procedures (e.g., degree of empathy, collaboration), (b) adherence to CTT-BW procedures that are not module specific (e.g., use of anecdotes, Socratic questions in teaching concepts), and (c) adherence to module-specific procedures (e.g., PTSD psychoeducation procedures). Tapes were rated by Edward S. Kubany, Mari A. McCaig, and a doctoral candidate in clinical psychology trained to conduct CTT-BW by Edward S. Kubany.

Of the 60 rated sessions, 40 were independently rated by two of the raters. Interrater agreement of overall adherence/nonadherence was 100% on the dimensions of adherence to nonspecific factors, 90% on the dimension of adherence to CTT-BW procedures that are not module specific, and 97% on the dimension of adherence to module-specific procedures. Of the 60 sessions rated, the therapists were rated as adhering acceptably or better to (a) nonspecific CBT procedures in every rated session, (b) CTT-BW procedures that are not module specific in 93% of rated sessions, and (c) module-specific procedures in 90% of rated sessions.

CTT-BW procedures. CTT-BW was conducted in a two-session per week, individual-therapy format—designed for implementation in 8 to 11 sessions of 1.5-hr for most clients. Session outlines are described below.

Session 1. The purpose of Session 1 is to establish rapport, obtain a partner abuse history, inquire about other significant traumatic experiences (based on clients' responses on the TLEQ), and provide clients an overview of our theoretical orientation and the topics that will be covered.

Sessions 2 to 4. During Sessions 2 to 4, we (a) complete the trauma history exploration if it was not completed during Session 1, (b) provide psychoeducation about PTSD and the rationale for exposure homework, (c) assign exposure homework (e.g., look at pictures of and visualize the abusive partner; watch movies on domestic violence), (d) provide psychoeducation on learned helplessness (Peterson & Seligman, 1983) and the importance of a solution-oriented attitude—as opposed to an obstacle-oriented attitude that focuses on reasons why problems can't be solved, (e) provide psychoeducation on negative self-talk and assign homework to monitor self-talk, and (f) provide psychoeducation on stress management and progressive muscle relaxation training.

Session 5 to Session 7 or 8. Two to four sessions are usually devoted to cognitive therapy for trauma-related guilt (CT-TRG; Kubany, 1997, 1998; Kubany & Manke, 1995; Kubany & Watson, 2002; see Kubany & Watson, 2003b), which has three phases: (a) guilt issue assessment, (b) guilt incident debriefings, and (c) cognitive therapy proper, which involves analytic exercises for correcting thinking errors that contribute to distortions in guilt-related beliefs (Kubany, 1997). The thinking errors are addressed in the context of four semistructured exercises in which clients are taught to distinguish what they knew "then" from what they know "now" and for reevaluating beliefs about justification, responsibility, and wrongdoing (in light of beliefs held and knowledge possessed when the trauma occurred). CT-TRG includes considerable psychoeducation, particularly in its early stages. For example, clients are told about the high prevalence of trauma-related guilt and told that trauma-related guilt usually has no rational basis whatsoever because trauma survivors tend to distort or exaggerate the importance of their roles in trauma. (There is *never* an implication of victim blame.) In later stages of CT-TRG, therapist and

client are actively involved in assessing the client's beliefs and considering alternative explanations.

Two to three guilt issues are usually addressed in the CT-TRG module. Guilt related to partner abuse is almost always addressed (e.g., guilt about "not having left sooner"; guilt about problems the children are having as a consequence of exposure to family violence). However, significant guilt related to other traumas is also addressed (e.g., guilt about not having disclosed childhood sexual abuse; guilt about having an abortion; guilt related to sudden, unexpected death of a loved one).

Sessions 8 to 11. CTT-BW modules covered in the latter sessions focus on self-advocacy and empowerment. These modules involve training in the following: (a) how to differentiate between assertive and aggressive speech and how to be assertive in response to verbal hostility, (b) how to identify potential perpetrators, (c) how to respond to unwanted telephone and face-to-face contacts with former partners, and (d) psychoeducation on self-advocacy strategies in five areas of functioning (e.g., making personal need satisfaction a top priority; decision-making that promotes one's best interests; standing up for one's rights; not tolerating disrespect). CTT-BW procedures are described in greater detail by Kubany and Watson (2002).

Results

The convergent and discriminative validity of CAPS ratings was assessed by comparing results obtained with the CAPS with results obtained on the paper-and-pencil measure of PTSD (the DEQ). CAPS interviewers were blind to administration of the DEQ, which participants also received at every assessment. The percentages of diagnostic agreements between the CAPS and the DEQ were 99%, 96%, 83%, 88%, and 92% at the initial assessment,

second pretherapy assessment (delayed therapy group only), posttherapy assessment, and 3- and 6-month follow-up assessments, respectively. CAPS and DEQ symptom scores were correlated .75, .73, .69, .78, and .89 at Assessments 1 through 5, respectively.

Seventy-seven percent of women in the immediate CTT-BW condition (46 of 59) completed CTT-BW. Eighty-three percent of women in the delayed CTT-BW condition (40 of 48) completed CTT-BW. Overall, 86 of the 107 women who started CTT-BW (80%) completed treatment. However, posttreatment assessment data were only available for 84 participants because two women who completed CTT-BW were unavailable for posttreatment assessments.

Comparisons, using analyses of variance (ANOVAs) or chi-square tests, were made between the initial scores of participants in the immediate CTT-BW condition and the delayed CTT-BW condition on (a) all the major outcome variables, (b) age, (c) education, (d) ethnicity (White/ethnic minority), (e) medication use (yes/no), (f) concomitant other therapy (yes/no), and (g) number of types of traumatic events reported. There were no significant differences on any of the comparisons, suggesting that random assignment was effective in canceling out error related to relevant measured variables.

Table 2 presents the data on the initial status of the 86 women who completed CTT-BW and the 21 women who started but did not complete CTT-BW—with respect to demographics, trauma history exposure, and psychopathology. Compared with completers, women who did not complete CTT-BW were on average

Table 2

Initial Status of Participants Who Completed CTT-BW (n = 86) and Who Started but Did Not Complete CTT-BW (n = 21) on Demographics, Trauma Exposure, and Treatment-Outcome Measures

Measure or variable	CTT-BW Completers		CTT-BW Noncompleters		
	M	*SD*	*M*	*SD*	*t*(105)
Age	43.6	9.8	36.3	9.1	3.24*
Education	13.8	2.4	12.3	1.7	3.34*
Types of events endorsed on the Traumatic Life Events Questionnaire—which also evoked intense fear, helplessness, or horror	8.8	4.1	9.7	4.6	0.43
Clinician Administered PTSD Scale	75.0	20.1	83.5	22.4	1.59
Distressing Event Questionnaire	56.4	14.1	62.5	13.6	1.84
Beck Depression Inventory	25.2	9.8	33.9	11.2	3.26**
Rosenberg Self-Esteem Scale[a]	14.7	4.9	10.8	5.7	2.81**
Trauma-Related Guilt Inventory					
Global guilt	2.9	0.8	2.8	1.0	0.51
Distress	3.2	0.7	3.5	0.5	2.09*
Guilt cognitions	2.2	0.8	2.2	0.9	0.05
Hindsight bias/responsibility	2.2	0.9	2.3	1.0	0.12
Wrongdoing	2.4	0.9	2.5	1.0	0.40
Justification	2.1	1.1	2.1	1.1	0.24
Sources of Trauma-Related Guilt Survey					
Overall guilt	2.3	0.9	2.5	0.9	0.72
Sum of guilt sources	132.1	64.9	174.0	79.5	2.23*
Personal Feelings Questionnaire					
Guilt proneness	7.4	2.6	7.7	2.8	0.46
Shame proneness	9.4	3.8	11.5	4.0	2.09*

Note. CTT-BW = cognitive trauma therapy for battered women; PTSD = posttraumatic stress disorder.
[a] Rosenberg scores were ordered to range from 0 (*lowest self-esteem*) to 30 (*highest self-esteem*).
* *p* < .05.   ** *p* < .01. (All *p*s uncorrected.)

younger, less educated, more depressed, more shame prone, and had lower self-esteem at the initial assessment. There were no significant differences between completers and noncompleters in terms of the number of women who were on medication or receiving other therapy. In addition, there were no significant differences between the percent of White and ethnic minority women who completed CTT-BW, 87% versus 73%; $\chi^2(1, N = 107) = 3.4, p > .05$.

Effects of Immediate CTT-BW: Comparisons With the Delayed CTT-BW Condition

The 46 women who completed immediate CTT-BW received between 8 and 17 therapy sessions, with a mean of 9.5 sessions ($SD = 1.6$) and a mode of 9 sessions. (In a small number of cases, more than 11 sessions were needed to complete the entire protocol because of individual differences in client engagement and/or variation in the number of traumas or guilt issues which needed to be addressed.)[2]

The effects of receiving immediate CTT-BW were compared with effects for the delayed group with a series of three $2 \times 2 \times 5$ repeated measures multivariate analyses of variance (MANOVA; Group $\times$ Measurement Period $\times$ Measure). The first MANOVA involved the primary outcome variables (CAPS, DEQ, BDI, and TRGI Global Guilt and Guilt Cognitions). The second MANOVA involved the secondary measures (TRGI Distress, RSES, and PFQ-Guilt and Shame). The third MANOVA involved the TRGI Guilt Cognition subscales.

In the first analysis, a significant interaction effect involving treatment group and measurement period was observed, $F(1, 70) = 127.85, p < .001$. This F ratio reflects a significant change between Assessment 1 and Assessment 2 for the immediate CTT-BW group, $F(1, 44) = 334.94, p < .0001$, but no change for the delayed group, $F(1, 26) = 3.35, ns$.

A significant Treatment Group $\times$ Measurement Period interaction was also observed in the second MANOVA, $F(1, 70) = 70.72, p < .0001$. As before, this reflected significant improvement on the composite of dependent measures for the immediate treatment group, $F(1, 44) = 132.73, p < .0001$, without corresponding changes among those in the delayed group, $F(1, 26) = 2.92, ns$. In the third MANOVA, a significant Group $\times$ Period interaction, $F(1, 70) = 89.33, p < .0001$, was again observed. In this instance, both groups showed some improvement, but the benefit was of substantially greater magnitude for the immediate treatment group, $F(1, 44) = 244.68, p < .0001$, than the delayed treatment group, $F(1, 26) = 4.55, p < .05$.

Each of the outcome variables was then subjected to a two-way ANOVA, with the pretherapy and posttherapy or pretherapy Assessment 2 scores serving as the repeated measures. A Bonferroni correction of $\alpha = .005$ was applied to correct for Type I error. Table 3 presents the means and standard deviations of immediate CTT-BW participants' scores on all the dependent measures at all assessment points and the statistical significance of all comparisons. Inspection of Table 3 shows that the pattern of results was exactly the same for every outcome variable. First, there were no significant differences between the immediate and delayed CTT-BW conditions on the initial assessments. Second, there were no significant changes in scores among participants in the delayed CTT-BW condition between the first and second pretherapy as-

sessments. Third, there were highly significant changes on all outcome variables from pretherapy to posttherapy assessments among participants in the immediate CTT-BW condition. As an illustrative example, Figure 1 presents the pattern of results obtained on assessment of PTSD with the CAPS. First, there were no significant differences in CAPS scores between participants in the immediate and delayed CTT-BW conditions at the initial pretherapy assessment, $F(1, 83) = 0.87, ns$. Second, CAPS scores of participants in the delayed CTT-BW condition were not significantly different between the first and second pretherapy assessments, $F(1, 39) = 3.41, ns$. Third, there were highly significant reductions in PTSD symptomatology between the initial and posttherapy assessments among participants in the immediate CTT-BW condition—reductions that were 78% in magnitude, $F(1, 44) = 274.79, p < .05$.

Clinical Significance of Treatment Effects

Forty-two of 46 women in the immediate CTT-BW condition (91%) no longer met diagnostic criteria for PTSD at the posttherapy assessment. As to *DSM–IV* PTSD symptom criteria, 58% of the 46 women ($n = 26$) no longer met the reexperiencing criterion (Criterion B), 89% ($n = 40$) no longer met the numbing/avoidance criterion (Criterion C), and 80% ($n = 36$) no longer met the hyperarousal criterion (Criterion D).

Seventy percent of the 46 participants in the immediate CTT-BW condition ($n = 33$) obtained pretherapy scores on the BDI in the moderate to severe or severe range (> 19), and only 2 participants (4%) obtained a BDI score in the normal range (< 10). At the posttherapy assessment, 83% of participants in the immediate therapy condition ($n = 30$) obtained BDI scores in the normal range. These pre–posttherapy changes meet stringent criteria for assessing clinically meaningful changes on the BDI (Ogles et al., 1996, pp. 84–85).

To quantify the clinical impact of the intervention, we determined effect sizes for each dependent measure and each group at the Time 2 assessment. This was the point at which the immediate therapy group had completed treatment and the delayed group was about to begin it. Effect sizes were calculated as the difference between group means divided by the standard deviation for the delayed therapy condition. The resulting metric expresses the group difference in terms of the untreated participants' standard deviation. As an interpretive example, means on the CAPS for the treated and untreated groups at the second assessment were 72.9 and 15.8, respectively. The standard deviation for the untreated

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[2] We conducted preliminary analyses to see whether therapeutic dosage or number of sessions received had an effect on treatment outcomes. We conducted analyses of covariance, using number of sessions received as a covariate and initial assessments and posttherapy assessments as the time variable for all 13 outcome measures, for all 84 participants who completed CTT-BW (and for whom we had posttherapy assessment data). None of the 13 F tests assessing the effects of therapeutic dosage was significant (even without making error-rate corrections). We also conducted Pearson's correlations examining the magnitudes of the relationships between number of sessions received and scores on each of the 13 outcome measures at posttherapy assessments. The correlations ranged in magnitude from $-.18$ to $.18$, and none was statistically significant. Thus, therapeutic dosage did not have any effects on treatment outcomes.

Table 3

Means (and Standard Deviations) and Effect Sizes for Initial and Replication Samples for Cognitive Trauma Therapy for Battered Women (CTT-BW) Treatment Completers

Instrument	Immediate therapy group					Delayed therapy group					
	Pretherapy (n = 46)	Posttherapy[a] (n = 45)	Effect size[b]	3-month follow-up[c] (n = 34)	6-month follow-up[c] (n = 32)	Pretherapy 1 (n = 40)	Pretherapy 2[d] (n = 40)	Posttherapy[e] (n = 39)	Effect size[e]	3-month follow-up[f] (n = 26)	6-month follow-up[c] (n = 30)
Clinician Administered PTSD Scale	72.9 (18.4)	15.8 (14.4)*	2.4	17.7 (19.7)	22.8 (23.7)	77.5 (21.9)	71.9 (23.8)	22.1 (23.3)*	2.4	19.7 (20.1)	26.1 (30.3)
Distressing Event Questionnaire	55.4 (12.7)	16.8 (16.1)*	2.4	15.7 (16.6)	13.9 (15.0)	57.5 (15.7)	52.0 (15.8)	18.2 (15.6)*	2.4	13.1 (12.4)	18.3 (22.3)
Beck Depression Inventory	25.1 (8.9)	4.6 (5.3)*	2.0	5.1 (6.8)	6.0 (7.3)	25.3 (10.8)	27.2 (10.5)	6.2 (7.2)*	2.0	6.1 (7.8)	7.2 (9.1)
Trauma-Related Guilt Inventory											
Global guilt	2.8 (0.7)	0.5 (0.6)*	2.9	0.6 (1.0)	0.6 (0.8)	3.0 (0.9)	2.6 (0.8)	0.8 (0.7)*	2.3	0.5 (0.7)	0.7 (0.8)
Distress	3.2 (0.6)	1.4 (0.7)*	2.6	1.3 (0.9)	1.4 (0.9)	3.2 (0.8)	3.0 (0.7)	1.6 (1.0)*	2.0	1.1 (0.8)	1.4 (1.0)
Guilt cognitions	2.1 (0.7)	0.4 (0.4)*	1.9	0.4 (0.5)	0.5 (0.6)	2.3 (0.8)	2.2 (0.9)	0.6 (0.7)*	2.0	0.4 (0.5)	0.7 (0.8)
Hindsight bias/responsibility	2.1 (0.8)	0.2 (0.3)*	2.4	0.2 (0.4)	0.3 (0.3)	2.4 (1.0)	2.1 (0.8)	0.4 (0.7)*	1.9	0.2 (0.4)	0.5 (0.8)
Wrongdoing	2.2 (0.9)	0.5 (0.5)*	1.9	0.5 (0.6)	0.7 (0.9)	2.5 (0.9)	2.5 (0.9)	0.8 (1.2)*	1.9	0.4 (0.6)	0.8 (1.1)
Justification	2.1 (1.1)	0.8 (1.1)*	1.3	0.9 (1.1)	1.0 (1.1)	2.2 (1.0)	2.1 (1.0)	1.0 (1.2)	1.0	0.7 (1.1)	0.9 (1.1)
Sources of Trauma-Related Guilt Survey											
Overall guilt	2.3 (0.7)	0.4 (0.5)*	1.7	0.4 (0.7)	0.4 (0.6)	2.3 (1.0)	2.1 (1.1)*	0.6 (0.9)*	1.5	0.4 (0.7)	0.6 (0.8)
Sum of guilt sources	128.4 (64.6)	21.2 (30.6)*	1.7	18.3 (25.2)	22.5 (29.9)	136.5 (65.9)	128.0 (61.4)	23.7 (37.9)*	1.8	11.9 (23.0)	34.1 (42.8)
Personal Feelings Questionnaire											
Guilt proneness	7.1 (2.4)	1.8 (2.0)*	1.9	1.5 (2.1)	1.4 (1.7)	7.6 (2.9)	6.7 (2.8)	1.8 (2.0)*	1.8	1.5 (1.9)	2.0 (2.2)
Shame proneness	9.4 (3.7)	2.7 (2.4)*	1.9	2.4 (1.7)	3.1 (3.1)	9.6 (3.8)	8.6 (3.6)	2.7 (2.5)*	1.5	2.7 (2.6)	3.4 (2.8)
Rosenberg Self-Esteem Scale[g]	14.8 (5.4)	24.5 (4.9)*	2.4	24.6 (5.4)	24.9 (5.4)	14.5 (4.5)	14.3 (4.5)	24.0 (5.0)*	1.8	22.9 (7.5)	24.6 (6.6)

[a] Significance tests are based on comparisons between pretherapy and posttherapy scores.   [b] These are between-groups calculation.   [c] All comparisons between posttherapy scores and 3- and 6-month follow-up scores were nonsignificant. Thirty-four participants in the immediate CTT-BW condition and 26 participants in the delayed CTT-BW condition received 3-month follow-up assessments. Thirty-two participants in the immediate CTT-BW condition and 36 participants in the delayed CTT-BW condition received 6-month follow-up assessments.   [d] All comparisons between Pretherapy 1 scores and Pretherapy 2 scores were nonsignificant.   [e] Significance tests are based on comparisons between Pretherapy 2 scores and posttherapy scores.   [f] These are within-group calculation (Hedge's g).   [g] Rosenberg scores were ordered to range from 0 to 30 (highest self-esteem).
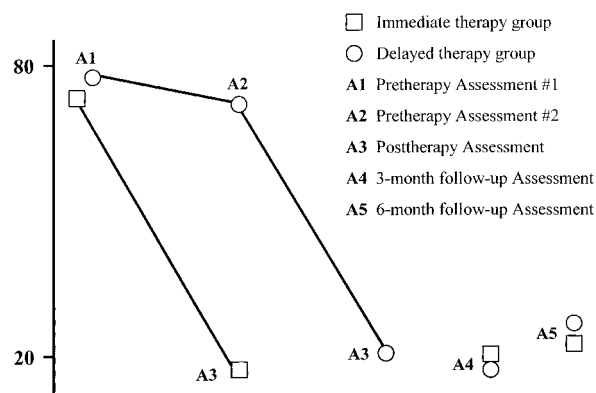* p < .001 (Bonferroni adjusted).

Figure 1. Pretherapy and posttherapy scores on the Clinician Administered PTSD Scale. PTSD = posttraumatic stress disorder.

group was 23.6. The resulting effect size of 2.4 indicates that the mean score for the treated cases is more than two and a half standard deviations below that of the wait-list/delayed group. Stated differently, a z score of 2.4 corresponds to the 99th+ percentile of the untreated group's distribution.

The effect sizes for the major outcome measures (excluding the TRGI subscales) ranged from 1.7 to 2.9. The mean effect size was 1.7, which corresponds to a mean percentile of 95.

Replication: Assessment of Treatment Outcomes After Delayed CTT-BW

The 40 women who completed delayed CTT-BW received between 8 and 13 sessions, with a mean of 9.3 sessions ($SD = 1.3$) and a mode of 9.0 sessions. Table 3 presents the means and standard deviations of delayed CTT-BW participants' scores on all the dependent measures at all assessment points and the statistical significance of all comparisons.

The effects of delayed CTT were examined through a series of three 3×5 (Measurement Period $\times$ Measure) repeated measures MANOVAs. These analyses involved the same three sets of dependent measures as described in the initial analyses. In the first analysis, a significant treatment period effect was observed, $F(2, 52) = 80.27$, $p < .0001$. This effect was accounted for primarily by a quadratic trend showing little change between pretreatment Assessments 1 and 2, $F(1, 26) = 3.35$, *ns,* followed by a significant improvement in functioning between pretherapy Assessment 2 and posttreatment assessment, $F(1, 26) = 81.55$, $p < .0001$.

Analysis of the secondary dependent measures yielded identical results. The treatment period effect was significant, $F(2, 52) = 41.51$, $p < .0001$. The period between the first two assessments yielded no significant change, $F(1, 26) = 2.92$, *ns,* followed by a significant improvement in functioning between pretherapy Assessment 2 and post-CTT-BW assessment, $F(1, 26) = 41.36$, $p < .0001$.

The tertiary measures showed a similar pattern. An overall treatment effect was observed, $F(2, 52) = 65.93$, $p < .0001$. This reflected a small improving trend between the first and second assessment periods, $F(1, 26) = 4.55$, $p < .05$, and a much larger gain after completion of treatment, $F(1, 26) = 71.50$, $p < .0001$.

Each of the outcome measures was then subjected to a one-way ANOVA, with pretherapy Assessment 2 scores and posttherapy scores serving as the repeated measures. As shown in Table 3, there were large and statistically significant changes between pretherapy Assessment 2 and posttherapy scores on every outcome measure. Thirty-two of 40 women in the delayed CTT-BW condition (80%) no longer met diagnostic criteria for PTSD at the posttherapy assessment. As to *DSM–IV* PTSD symptom criteria, 58% of the 40 women ($n = 23$) no longer met the reexperiencing criterion (Criterion B), 83% ($n = 33$) no longer met the numbing avoidance criterion (Criterion C), and 68% ($n = 27$) no longer met the hyperarousal criterion (Criterion D).

Seventy-five percent of the 40 participants in the delayed CTT-BW condition who completed CTT-BW ($n = 30$) obtained pretherapy scores on the BDI in the moderate to severe or severe range, and only 2 participants (5%) obtained a BDI score in the normal range. At the posttreatment assessment, 75% of these participants ($n = 30$) obtained BDI scores in the normal range.

For delayed CTT-BW cases, effect sizes were computed by subtracting their posttreatment mean from the pretreatment mean of all participants combined and dividing the result by the baseline standard deviation for all participants combined. The resulting quantity, known as Hedge's *g,* represents the difference between pre- and posttreatment expressed in standard deviation units (Foa, Keane, & Friedman, 2000). To illustrate, consider the treatment effect for the CAPS for the delayed therapy participants. The effect size estimate of 2.4 indicates that the delayed CTT-BW group's mean at posttreatment was 2.4 standard deviations below the mean for all untreated participants at baseline. For the delayed CTT-BW group, mean effect sizes for the major outcome measures ranged from 1.5 to 2.4, as shown in Table 3.

Intent-to-Treat Analyses

Of 63 women assigned to the immediate CTT-BW condition, 4 did not start treatments, and 13 did not complete treatment. Of 62 women assigned to the delayed CTT-BW condition, 14 did not start treatment (10 dropped out before their second pretherapy assessment) and 13 did not complete treatment. To examine the effects of attrition on outcomes, considering therapy-nonstarters and noncompleters as treatment failures, we conducted intent-to-treat analyses on the data by evaluating outcomes for all participants who were randomly assigned, using pretreatment data scores for posttreatment scores for nonstarters and noncompleters (Kazdin, 1994).

Effects of immediate CTT-BW. The same three series of MANOVAs were conducted to examine the effects of immediate CTT-BW in the intent-to-treat analyses as in the treatment completer analyses. In the analysis of the primary outcome measures, a significant interaction effect involving treatment group and measurement period was observed, $F(1, 122) = 77.20$, $p < .0001$. This F ratio reflects a significant change between Assessment 1 and Assessment 2 for the immediate CTT-BW group, $F(1, 62) = 110.70$, $p < .0001$, accompanied by a smaller but significant improving trend for the delayed group, $F(1, 60) = 4.04$, $p < .05$. A significant Treatment Group $\times$ Measurement Period interaction was also observed in the MANOVA performed on the secondary outcome measures, $F(1, 122) = 28.59$, $p < .0001$. As before, this reflected significant improvement on the composite of dependent

measures for the immediate treatment group, $F(1, 62) = 44.65$, $p < .0001$, without corresponding changes among those in the delayed condition, $F(1, 60) < 1.00$, ns. In the MANOVA performed on the TRGI Guilt Cognition subscales, a significant Group × Period interaction was again observed, $F(1, 122) = 82.46$, $p < .0001$. The immediate treatment group showed significant benefit, $F(1, 62) = 95.13$, $p < .0001$, whereas no change was seen among participants in the delayed condition, $F(1, 60) < 1.00$, ns.

Each of the individual outcome measures was then subjected to a two-way ANOVA, with the pretherapy Assessment 2 and posttherapy scores serving as the repeated measures. Table 4 presents the means and standard deviations of participants' scores on all the dependent measures at all assessment points and the statistical significance of all comparisons. As in the completer analyses, the pattern of results was the same for every outcome measure. First, there were no significant differences between the immediate and delayed CTT-BW conditions on the initial assessments. Second, there were no significant changes in scores among participants in the delayed CTT-BW condition between the first and second pretherapy assessments. Third, there were significant changes on all outcome measures from pretherapy to posttherapy assessments among participants in the immediate CTT-BW condition.

Outcome after delayed CTT-BW. In the intent-to-treat analyses, the effects of delayed CTT-BW were examined with the same series of repeated measures MANOVAs as in the completer analyses. In the analysis of the primary outcome measures, a significant treatment period effect was observed, $F(2, 120) = 62.67$, $p < .0001$. This effect was accounted for primarily by a quadratic trend showing little change between pretreatment Assessments 1 and 2, $F(1, 60) = 4.04$, $p < .05$, followed by a significant improvement in functioning between pretherapy Assessment 2 and posttreatment assessment, $F(1, 60) = 64.00$, $p < .0001$. Analysis of the secondary dependent measures yielded identical results. The treatment period effect was significant, $F(2, 120) = 40.68$, $p < .0001$. There was no significant change between the first two assessments, $F(1, 60) < 1.00$, ns, but substantial improvement emerged after treatment, $F(1, 60) = 46.52$, $p < .0001$. The tertiary measures showed a similar pattern. An overall treatment effect was observed, $F(2, 120) = 50.20$, $p < .0001$. No change was observed between the first and second assessment periods, $F(1, 60) < 1.00$, ns, whereas a large and statistically significant gain emerged after treatment, $F(1, 60) = 58.76$, $p < .0001$.

The individual outcome measures were then subjected to univariate ANOVAs. Results presented in Table 4 show that, for both the immediate and delayed CTT-BW groups, there were large, statistically significant improvements on all treatment-outcome variables, even when pretherapy data for nonstarters and noncompleters were included in the analyses.

Three-Month Follow-Up Assessments

Three-month follow-up data were obtained for 75% of the women who completed immediate CTT-BW ($n = 34$) and for 65% of the women who completed delayed CTT-BW ($n = 26$). Results presented in Table 3 show that participants' improvements at the post-CTT-BW assessments were maintained at the 3-month follow-up assessments—on every outcome measure, for women in both conditions. Repeated measure F tests comparing post-

CTT-BW and follow-up scores were all nonsignificant. Eighty-seven percent of all participants assessed at 3-month follow-up ($N = 60$) did not meet diagnostic criteria for PTSD.

Six-Month Follow-Up Assessments

Six-month follow-up data were obtained for 59% of the women who completed immediate CTT-BW ($n = 39$) and for 69% of the women who completed delayed CTT-BW ($n = 36$). Results presented in Table 3 show that participants' improvements at the post-CTT-BW assessments were still being maintained at the 6-month follow-up assessments—on every outcome measure, for women in both conditions. Repeated measure F tests comparing post-CTT-BW and follow-up scores were all nonsignificant. Eighty-one percent of all participants assessed at 6-month follow-up ($N = 62$) did not meet diagnostic criteria for PTSD.

Good End-State Functioning

To determine the percentage of participants who achieved good overall functioning at the end of therapy (absence of both PTSD and depression), we computed an index that combined scores on the DEQ and BDI (cf. Foa, Dancu, et al., 1999; Resick, Nishith, Weaver, Astin, & Feuer, 2002). Good end-state functioning was defined as (a) at or below 25 on the DEQ and (b) at or below 10 on the BDI. Sixty-nine percent of participants who completed CTT-BW had good end-state functioning at the posttreatment assessment, and 68% and 70% had good end-state functioning at the 3- and 6-month follow-up assessments, respectively.

Therapist Effects

We conducted preliminary analyses to examine possible therapist differences in outcomes achieved. We conducted Bonferroni-corrected ANOVAs on all 13 outcome measures for the four therapists who completed CTT-BW with 6 or more clients and the three therapists combined who completed the therapy with 5 or fewer clients. The resultant F ratios were all nonsignificant (all ≤ 1.0). Table 5 presents (a) mean CAPS scores, (b) mean BDI scores, (c) percent of participants who no longer met criteria for PTSD at the posttherapy assessment, and (d) percent of participants who obtained BDI scores in the normal range at the posttherapy assessment by different therapists. The percentage of clients who no longer met diagnostic criteria for PTSD at the posttherapy assessment ranged from 50% to 95% for the four therapists who completed CTT-BW with 6 or more clients and for the three therapists combined who completed the therapy with 5 or fewer clients. The percentage of clients who obtained BDI scores in the normal range at the posttherapy assessment ranged from 67% to 95%.

Table 5 also presents outcome data for the three therapists combined who had mental health backgrounds and the five therapists combined who had no formal education or training in counseling or PTSD, and for the five female therapists combined and the two male therapists combined. Therapists with and without mental health backgrounds both achieved reductions in PTSD and depression in a substantial proportion of their clients. For example, the two therapists with only baccalaureate degrees and no formal mental health training were successful in removing PTSD diagnoses in 93% and 88% of their clients, respectively. Similarly, the

Table 4
Means (and Standard Deviations) and Effect Sizes for Initial and Replication Samples Using Intent-to-Treat Analyses

Instrument	Immediate therapy group (n = 63)			Delayed therapy group (n = 62)			
	Pretherapy	Posttherapy[a]	Effect size[b]	Pretherapy 1	Pretherapy 2[c]	Posttherapy[d]	Effect size[e]
Clinician Administered PTSD Scale	74.4 (19.9)	33.3 (32.8)*	1.8	78.0 (20.5)	74.1 (21.9)	42.8 (34.5)*	2.0
Distressing Event Questionnaire	56.5 (13.4)	27.9 (24.4)*	1.4	58.0 (15.3)	52.7 (16.3)	24.7 (21.7)*	2.0
Beck Depression Inventory	26.9 (10.1)	12.0 (14.2)*	1.6	27.4 (11.0)	28.7 (10.5)	15.5 (14.8)*	1.6
Trauma-Related Guilt Inventory							
Global guilt	2.7 (0.8)	1.1 (1.2)*	2.0	2.9 (0.8)	2.6 (0.8)	1.6 (1.2)*	1.9
Distress	3.2 (0.7)	1.9 (1.1)*	1.7	3.2 (0.8)	3.0 (0.7)	2.2 (1.2)*	1.7
Guilt cognitions	2.1 (0.8)	0.9 (1.1)*	1.6	2.3 (0.8)	2.2 (0.8)	1.2 (1.0)*	1.8
Hindsight bias/responsibility	2.2 (0.8)	0.8 (1.0)*	1.6	2.3 (0.9)	2.1 (0.9)	1.1 (1.1)*	1.7
Wrongdoing	2.3 (1.0)	1.0 (1.2)*	1.7	2.4 (0.8)	2.4 (0.8)	1.4 (1.3)*	1.0
Justification	2.2 (1.1)	1.2 (1.2)*	1.2	2.2 (1.1)	2.3 (1.0)	1.6 (1.4)*	0.8
Sources of Trauma-Related Guilt Survey							
Sum of guilt sources	135.6 (71.3)	59.7 (80.9)*	1.2	137.5 (62.1)	133.9 (60.2)	69.9 (76.3)*	1.2
Personal Feelings Questionnaire							
Guilt proneness	7.2 (2.5)	3.4 (3.4)*	1.4	7.6 (2.7)	7.0 (2.5)	3.9 (3.4)*	1.5
Shame proneness	9.6 (3.6)	4.8 (4.3)*	1.8	10.6 (3.9)	9.5 (3.6)	5.9 (4.9)*	1.3
Rosenberg Self-Esteem Scale	13.9 (5.6)	20.8 (7.8)*	1.5	13.6 (5.0)	13.2 (5.4)	19.1 (8.4)*	1.5

[a] Significance tests are based on comparisons between pretherapy and posttherapy scores. [b] These are between-groups calculation. [c] All comparisons between Pretherapy 1 scores and Pretherapy 2 scores were nonsignificant. [d] Significance tests are based on comparisons between Pretherapy 2 scores and posttherapy scores. [e] These are within-group calculation (Hedge's *g*).
* *p* < .001 (Bonferroni adjusted).

Table 5
Posttherapy Outcomes By Therapist

Therapist	n	CAPS		BDI		Without PTSD		With BDI ≤ 10	
		M	SD	M	SD	n	%	n	%
1	21	15.3	18.7	2.8	3.2	19	90	20	95
2[a]	17	21.2	17.3	6.9	6.5	15	88	13	76
3[a]	28	16.3	15.8	5.2	6.1	26	93	24	86
4	6	31.3	34.3	9.7	3.2	4	67	4	67
All others[b]	12	20.6	20.7	5.9	4.3	10	83	10	83
Therapists with mental health training	30	15.4	17.3	3.3	3.4	27	90	28	93
Therapists without mental health training	54	20.6	20.0	6.5	7.2	47	87	42	78
Male therapists	26	15.5	18.3	3.0	3.3	23	88	24	92
Female therapists	58	20.2	19.5	6.4	7.0	51	88	46	79

Note. CAPS = Clinician Administered PTSD Scale; BDI = Beck Depression Inventory; PTSD = posttraumatic stress disorder.
[a] Credentials included baccalaureate degrees and extensive experience as domestic violence counselor and counselor as well as no formal education or training in PTSD or counseling. [b] Three therapists who completed cognitive trauma therapy of battered women had 5 or fewer clients.

male and female therapists both achieved reductions in PTSD and depression in a substantial proportion of their clients. In summary, there were no overall differences in therapeutic outcomes achieved by the different therapists, and similar outcomes were achieved by male and female therapists and by therapists who differed substantially in their levels of formal education and training.

Client Satisfaction With Services Received

Combining participants in both conditions, the CSQ-8 was completed by 75 women at the posttherapy assessment and by 54 and 57 women at the 3- and 6-month follow-up assessments, respectively. Scores on the CSQ-8 can range from 0 (*lowest*) to 32 (*highest satisfaction*). At the posttherapy assessment, participants obtained a mean CSQ-8 score of 30.8 ($SD = 2.2$). At the 3- and 6-month follow-up assessments, mean CSQ-8 scores were 30.8 ($SD = 2.3$) and 30.7 ($SD = 2.5$), respectively. The percentage of participants who were maximally satisfied with services received (on the basis of CSQ-8 scores of 32) was 64%, 67%, and 72% at posttest, 3-month follow-up, and 6-month follow-up, respectively.

Discussion

This study and the first treatment-outcome study of CTT-BW represent the first treatment-outcome research targeting posttraumatic stress in battered women. The present study replicates and extends the first study with a larger sample ($N = 125$ vs. $N = 37$), with multiple therapists (seven vs. one), and with follow-up assessments obtained at 6 months as well as 3 months after completion of therapy. Women were randomly assigned to immediate or delayed CTT-BW conditions. PTSD and depression among women in the delayed CTT-BW condition did not diminish over the 6 weeks between their first and second pretherapy assessments. However, 87% of women who received posttherapy assessments after completing CTT-BW no longer met diagnostic criteria for PTSD—with corresponding reductions in depression, guilt, and shame and significant increases in self-esteem. Therapeutic im-

provements were maintained at 3- and 6-month follow-up assessments. Sixty-nine percent of participants achieved good end-state functioning (absence of both PTSD and depression) after completing CTT-BW, which is comparable to results obtained in a recent treatment-outcome study of cognitive processing therapy and prolonged exposure with samples of rape victims (Resick et al., 2002). In the first treatment-outcome study of CTT-BW, 88% of participants achieved good end-state functioning.

There were several findings—in addition to the overall results—which may add to the significance of this study, especially when considered in conjunction with the results of the first treatment-outcome study of CTT-BW. First, 85% of women who completed CTT-BW no longer met the *DSM–IV* PTSD numbing/avoidance criterion (Criterion C) at the posttherapy assessment. These findings are similar to those obtained by Kubany, Hill, and Owens (2003), in which 94% of participants did not meet Criterion C at the posttherapy assessment. These findings are noteworthy because PTSD treatments have in general been most successful in reducing intrusive symptoms but have been less successful in eliminating numbing and avoidance symptoms (e.g., Blake & Sonnenberg, 1998; Solomon, Gerrity, & Muff, 1992). Second, the treatment was efficacious across an educationally and ethnically diverse group of women. For example, CTT-BW worked as well with ethnic minority women as it did with White women. Eighty-seven percent of ethnic minority participants and 86% of White participants who completed CTT-BW no longer met diagnostic criteria for PTSD at the posttherapy assessment. In the initial treatment-outcome study of CTT-BW, all 14 ethnic minority participants and 16 of 18 White participants no longer met diagnostic criteria for PTSD at the posttherapy assessment. Third, efficacious results were achieved by therapists with no formal psychotherapy training, and two of the therapists had only baccalaureate degrees. These findings may have important public health implications because the majority of victim services providers who counsel and conduct support groups for battered women are paraprofessionals with no formal training in psychological or psychiatric counseling.

Such individuals represent a large potential pool of individuals who could be trained to conduct CTT-BW.

A fourth finding that may enhance the significance of this study is that efficacious results were obtained by the male therapists as well as the female therapists. In most treatment-outcome studies of PTSD in abused women, the therapists have all been women (e.g., Cloitre, Koenen, Cohen, & Han, 2002; Foa, Dancu, et al., 1999; Owens, Pike, & Chard, 2001; Resick et al., 2002). Our findings suggest that male therapists may not be sufficiently utilized in PTSD programs for women (some women may actually prefer and do better with a male therapist) and call for research that examines the effects of therapist gender in treatments of abused women.

Our research to examine the efficacy of CTT-BW has some limitations, one of the most important of which concerns the population to which the findings apply. To be eligible to participate in the two treatment trials conducted thus far, women had to be out of an abusive relationship for at least a month, with no intention to reconcile, and with no recent trauma (for at least 30 days). Hence, the findings are not generalizable to women who are currently in an abusive relationship or are ambivalent or undecided about whether to reconcile. In fact, it has been our experience in working with women who are still in abusive relationships or considering reconciliation that greater formal emphases need to be placed on safety issues and decision making (e.g., whether to stay or reconcile) than are embodied in the treatment model as described.[3]

Another limitation on the generalizability of the findings relates to our study inclusion criterion that women had to report at least moderate abuse-related guilt to be eligible to participate. Whereas the results indicate that CTT-BW is efficacious with battered women who experience guilt, the approach may or may not apply equally well with women who have minimal or no abuse-related guilt. When we first began our research to evaluate the efficacy of CTT-BW, we believed that CT-TRG was so important that, if guilt was not an important issue, CTT-BW might not be as effective as it would be if guilt was not a significant issue.

Even if CTT-BW is not as effective with women who have minimal or no abuse-related guilt, we suspect that the number of formerly battered women with PTSD for whom CTT-BW does not apply is relatively small. For example, in our research to cross-validate the TRGI, 75% of 212 women who were diagnosed with PTSD reported moderate or greater abuse-related guilt (Kubany, 2000). In addition, our experience has shown that some women who say they have little or no abuse-related guilt do not understand the meaning of guilt to be an unpleasant feeling with associated beliefs that one should have thought, felt, or acted differently (Kubany & Watson, 2003b). When women who say they have little or no guilt are queried about whether they think they should have done something differently, they often respond affirmatively (e.g., "Oh, yeah. I should have left him a long time ago. I beat myself about that all the time"). Finally, even clients who have no partner abuse-related guilt often experience significant guilt related to other traumatic events—such as incest or sudden death of a loved one—which is addressed in CTT-BW.

Another potential limitation of our study is that, although assessors were blind to participants' condition assignments, we did not obtain interrater reliability checks on the CAPS. This potential limitation is mitigated by the fact that we obtained evidence for the validity of the CAPS ratings. A second measure of PTSD—the DEQ (to which assessors were blind)—was also administered at every assessment, and there were high correspondences between diagnostic classifications based on the CAPS and diagnostic classifications based on the DEQ. There were also high correlations between total PTSD symptom scores on the CAPS and total symptom scores on the DEQ. The potential limitation of CAPS reliability may also be mitigated somewhat by the fact that the assessors were given intensive training in administration of the CAPS (a lecture, watching videos of CAPS administration, observing Edward S. Kubany administer the CAPS, being observed administering the CAPS by Edward S. Kubany). In an earlier study in which interrater reliability ratings were obtained and this method of training used, the diagnostic agreement between raters was almost perfect, and the symptom score correlations between raters were above .90 (Kubany, Leisen, et al., 2000).

Some readers may wonder whether the 6-week follow-up between the first and second pretherapy assessment for participants in the delayed CTT-BW group was long enough, given the popular view that battered women's mental health problems will dissolve once they are safely out of an abusive relationship. There are several reasons, however, why a longer pretherapy follow-up may have been unlikely to result in any appreciable reduction in symptoms. First, research that has followed and assessed battered women while they are in and after they are out of an abusive relationship indicates that a substantial proportion of women still have mental health problems 6 months to 3 years later (J. C. Campbell & Soeken, 1999; R. Campbell, Sullivan, & Davidson, 1995; cf. Resick et al., 2002). In our previous research with physically and/or sexually abused women, 80% who had received services in the past year from a provider that serves abused women met full diagnostic criteria for PTSD on a structured interview (Kubany, Leisen, et al., 2000). Second, there is evidence that when PTSD symptoms are severe—as was the case among participants in the present study—symptoms will often not dissipate with the mere passage of time or traditional counseling (e.g., Rothbaum et al., 1992). Results of the National Comorbidity Survey indicate that more than one third of those diagnosed with PTSD still have the condition 5 years later—whether or not they have had counseling (Kessler et al., 1995). Third, in the present study, not only were there no significant reductions in PTSD or depression symptomatology over the 6 weeks between the first and second pretherapy assessment for delayed therapy participants, there were not even any discernible trends in the direction of improved functioning. These results are identical to those obtained in our first treatment-outcome study of CTT-BW (Kubany, Hill, & Owens, 2003). Finally, most participants in the present study had been out of an abusive relationship for an extended period of time (the mean period of time since the last incident of abuse for women in the delayed therapy group was 5.3 years). Yet, all women in the delayed therapy group met full diagnostic criteria for partner abuse-related PTSD at study entry. If symptoms were going to diminish over time after the trauma had ended, these women would not be experiencing posttraumatic stress years later. Unfortunately,

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[3] We do address safety issues (e.g., engage in safety planning) if concerns about safety arise (although this has been relatively infrequent) and routinely refer clients to support groups and agencies that provide other services for battered women, such as legal advocacy.

many people, including many health care professionals, fail to appreciate that many battered women continue to suffer emotionally long after they are safely out of abusive relationships. This circumstance is not unlike the inability of many Americans to comprehend or appreciate the posttraumatic suffering of Vietnam veterans after they had left the war zone.

The results of this study need to be placed in the context of the existing literature on battered women and their treatment. Although some counseling or therapy approaches for battered women have previously been reported, these accounts have been largely descriptive and/or anecdotal in nature, and few have been subjected to peer review (e.g., Barnett & LaViolette, 1993; Douglas & Strom, 1988; Dutton, 1992b; Goodman & Fallon, 1995; Walker, 1994). In fact, prior to our research in this area, there had been a dearth of treatment-outcome studies with battered women addressing *any* aspect of their mental health. The only treatment-outcome study for this population identified in our review of the literature was a quasiexperimental evaluation of outcome across 12 support groups for battered women (Tutty, Bidgood, & Rothery, 1993).

Finally, because guilt is a central construct in our conceptualization of posttraumatic stress and is one of the major treatment components and outcome measures in CTT-BW, it may be important to clarify the meaning of guilt and how guilt relates to other cognitive constructs that have been implicated in posttraumatic stress. We have conceptualized and obtained empirical support for guilt as a multidimensional construct comprised of negative affect and four guilt-related beliefs or cognitions: (a) perceived responsibility for causing a negative outcome, (b) perceived insufficient justification for actions taken, (c) perceived violation of values, and (d) beliefs about the foreseeability and preventability of negative outcomes (which are often distorted by hindsight-bias; Fischhoff, 1975) (Kubany et al., 1995, 1996; Kubany & Manke, 1995; Kubany & Watson, 2003b). (In a two-factor solution of the TRGI, all negative affect items loaded on a Distress factor and all cognitive items loaded on a Guilt Cognitions factor; Kubany et al., 1996.) Guilt is defined phenomenologically as an unpleasant feeling with accompanying beliefs that one should have thought, felt, or acted differently. CT-TRG in CTT-BW focuses on correcting numerous thinking errors that cause distortions in each of the four guilt cognitions and result in guilt that has no rational basis.

Guilt may be most directly contrasted with anger, which can be defined as an unpleasant feeling accompanied by beliefs that *someone else* should have thought, felt, or acted differently (Kubany & Watson, 2003b). Guilt is directed "in," whereas anger is directed "out" (e.g., Weiner, Graham, & Chandler, 1982). Shame, which is often comorbid with guilt, can be defined as an unpleasant feeling plus a negative evaluation of one's entire self, personality, intelligence, or character (e.g., "I feel inadequate"; Kubany & Watson, 2003b; cf. Foa, Ehlers, et al.'s [1999] cognitive construct of "Negative Cognitions about the Self"). Shame is associated with negative cognitions about one's entire self, whereas guilt is associated with a negative evaluation of one's specific actions in specific situations.

Unfortunately, the role of cognitions or personal meaning in trauma has been studied under a glut of labels, reflecting many cognitions that overlap with guilt cognitions, but which are often loosely defined. These labels include *appraisals,* internal and external *attributions, maladaptive beliefs,* explanations of *why* the trauma occurred, narrative *trauma themes, self-blame, cognitive*

schemata, cognitive schemas, pathogenic schemas, etc. (Kubany, 1997, p. 124).

The cognitive construct with which guilt is most closely related is self-blame, which has been widely studied in trauma research and was included in our literature review for the TRGI (Kubany et al., 1996). Behavioral self-blame[4] is completely subsumed or encompassed by the guilt construct. Self-blame involves attributions about responsibility, with connotations of wrongdoing (e.g., Morris, 1982) and negative affect. However, self-blame does not connote hindsight bias or insufficient justification for actions taken. Unfortunately, most investigators studying self-blame do not define the construct—perhaps because of the view that the meanings of *blame* and *self-blame* are self-explanatory and do not need to be defined.

Studies of behavioral self-blame among battered women have tended to focus narrowly on attributions of responsibility for the abuse itself (e.g., Andrews & Brewin, 1990; Cascardi & O'Leary, 1992; Dutton, Burghardt, Perrin, Chrestman, & Halle, 1994). By comparison, guilt also suggests negative evaluations of actions that may be far removed from the abuse (e.g., guilt over not having broken off the relationship sooner; guilt about having "allowed" the children to witness the abuse). Research that examines the convergent and discriminant validity of guilt cognitions vis-à-vis other cognitive constructs may expand our understanding of the role of cognitions in posttraumatic stress (e.g., Kubany & Watson, 2003c).

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[4] Janoff-Bulman (1985) distinguished between "behavioral self-blame" and "characterological self-blame"—which, according to Tangney, Wagner, and Gramzow (1992), bear "some resemblance" to guilt and shame (p. 470). Janoff-Bulman has argued that behavioral self-blame is an adaptive response to trauma. However, the preponderance of empirical evidence— and all or almost all recent evidence—indicates that any kind of self-blame is associated with poorer posttrauma adjustment (e.g., Dutton et al., 1994; Frazier & Schauben, 1994).

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